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GEORGE J. MILLER, *Editor*

The JOURNAL *of* GEOGRAPHY

A MAGAZINE FOR SCHOOLS

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Dr. Finch is head of the department of geography at the University of Wisconsin and joint author of Whitbeck and Finch, Economic Geography; Finch and Baker, Geography of World Agriculture; and Whitbeck and Finch series of wall maps. He is also author of two series of economic geography maps, one dealing with the United States, and the other with the world.

The Introductory Course in Economic Geography in the School of Business. By John E. Orchard 186

Dr. Orchard is an associate professor of economic geography in the School of Business, Columbia University. He has published a number of papers in economic and geographic periodicals including, The Pressure of Population in Japan, and Can Japan Develop Industrially? *Geographical Review*, July, 1928, and April, 1929. At present he is engaged in a study of the progress of industrialization in the Far East. The first part of the study, a volume on the Industrial Progress of Modern Japan, will appear shortly.

Filling in the Map. The Freshman Work in Geography at the University of Michigan. By Preston E. James 199

Dr. James is an associate professor of geography at the University of Michigan. He is in charge of the freshman work of the department, and is developing a textbook for use in that course along the lines suggested in the present paper. His work is well known to JOURNAL readers thru his numerous contributions. He has also prepared an article entitled "The Shari Plain" as a contribution to our experiment in geographic writing, which will be published next year. Dr. James will spend the summer, fall, and winter in field studies in Brazil.

Introductory Course in Geography in the Teachers College. By B. H. Schockel 203

Mr. Schockel is a professor of geography and geology at Indiana State Teachers College. He has been granted a leave of absence for the period from next July to March to study and develop the introductory college course. Among his contributions to the field of geography are: Changing Conditions in the Kentucky Mountains, *Scientific Monthly*, 1916; Settlement and Development of the Lead and Zinc Region of the Driftless Area, *Mississippi Valley Historical Review*, 1917; and a Pictorial Relief Map of Indiana, *Teachers College Journal*, 1929.

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Dr. Strong is Chief of the Geographic Section, United State Department of Commerce. Her work is familiar to geographers and economists, and to leaders in the industrial and commercial field. She has a manuscript nearly completed for our series of articles dealing with industries. It will treat the subject of commerce based upon the latest compiled material.

The Westward Movement of Cotton Growing in the United States. By Charles E. Landon 215

Dr. Landon is an assistant professor of economics and economic geography at Duke University and author of Silk Production in Latin America, JOURNAL OF GEOGRAPHY, October, 1929; author of The World Cotton Situation; co-author with Dr. Bogart of Modern Industry, and co-editor with Dr. Wright of Readings in Marketing Principles.

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VOLUME XXIX MAY, 1930 NUMBER 4

FOREWORD

To study the problems of geographic education is one of the major purposes of the National Council of Geography Teachers. These problems usually become the subject of extensive investigations, undertaken by authorized committees or individuals. Reports on two such investigations have been published. One dealt with "Geography in the Junior High School" and the other presented "An Elective Course in Senior High School Geography."

What the character of the introductory college course should be in order that it may best meet the needs in a particular educational institution is another very perplexing problem. This problem is being studied by many leading geographers thruout the country and many types of courses are being prepared and tested. Dr. N. A. Bengtson of the University of Nebraska, President of the National Council in 1929, invited a number of geographers to present their views of this problem for discussion at the Columbus meeting of the Council last December. Four of these views are presented herewith as Professional Paper No. 3. They illustrate the thoroness with which the problem is being attacked and the variety of material available for a highly valuable and stimulating introductory course in geography. It is hoped that this symposium of views contains helpful suggestions to those working on similar problems, and that institutions not now offering a geography course may find these units sufficiently challenging to warrant the introduction of geography in the curriculum.

GEO. J. MILLER, *Editor*

AN INTRODUCTORY COURSE IN COLLEGE GEOGRAPHY FOR LIBERAL ARTS STUDENTS

V. C. FINCH
University of Wisconsin

For a man in any university faculty to tell a member of his own staff that he has found the proper way to compound a recipe for elementary instruction invites criticism. How much more rash then is he who undertakes to prescribe for his colleagues in other institutions. Merely to undertake a paper on the arrangement of an introductory course in college geography for liberal arts students flies in the face of caution. My views must of course reflect the adjustment of my own philosophy of geography to the practical requirement demonstrated by more than fifteen years of association with large groups of elementary students.

COURSE MATERIAL MUST BE PRACTICAL

In taking up the subject under discussion my first rash pronouncement is that he who lays anew the course of an elementary class in geography, while he strives toward the ideal in geographical philosophy and in pedagogy, must trim his ship to the winds of actual conditions and be practical. If other college requirements imposed no limit on time devoted to geographical studies; if departmental budgets imposed no limits upon the number or maturity of instructors; if the secondary school preparation of college entrants could be prescribed and uniformly completed, then we might in our first course in geography, sail into the realm of geographical-pedagogical idealism. We might in the first class exercise begin to picture the characteristics of regions and to weave that intricate and beautiful pattern of interrelationships that is the essence of geography. In the absence of these prerequisites strict adherence to an ideal becomes impracticable. I would therefore begin my college course in geography by the illogical procedure of doing something other than geography; I would first study the form elements of the natural environment. To this task I would devote from one-third to one-half of the time at my disposal. Thereafter I would enter upon the principal task, geography.

Before we proceed to a study of the desirable content of our college course we may note that this matter of sacrificing the ideal to the practical is pertinent also to the method by which any sort of

material is presented to the students. Some instructors may feel that they have come close to their ideal in the matter of course content. Few are so well satisfied with the means by which their course material is presented to the students that they will see nothing to improve in it. The ideal presentation to a large class would of course be by able, experienced and travelled geographers to small discussion groups with ample time for all sorts of supplementary demonstrations on appropriate topics. I know of no place where this is done. Of practical compromises with necessity on this matter there is great variety. Budget limitations cut some introductory courses short indeed. At the University of Wisconsin we are favored. Elementary geography still maintains natural science status and as such is given a generous time allowance. We are able to take a class of more than 400 students thru various exercises requiring ten hours of class-room time per student per week for a year. At present this consists of (1) two hours per week of class assembly for lecture, to lay out the elements of new subjects in general perspective, (2) six hours per week of supervised study in laboratory and discussion groups of 30 or less, and (3) two hours per week of formal recitation in groups of 30 for testing the result of lecture and textbook assignments. This is by no means ideal, but it has the practical merit of inexpensiveness, since most of the laboratory supervision and much of the quiz work is done by graduate students under the general supervision of more experienced persons.

STUDIES IN NATURAL ENVIRONMENT REQUIRED

We may now return to the matter of the factual and philosophical content of the course and to my initial thesis that there should first be an introduction to the forms of the natural environment. We shall find little disagreement among geographers on the question of whether an understanding of the natural environment is required. Geography is unintelligible without it, and most entering students do not have it. Disagreement is likely over the question of what these preliminaries shall consist of and how and when they shall be introduced.

Ideally the background in the natural environment should consist of an understanding of the nature and genesis of all its components. This is an impossible ideal to attain. It would require mastery of most of the sciences. Practically, it must be made to

cover those forms in the natural environment that experience teaches us show the most intimate interrelationships with human activities and the most direct connection with the cultural patterns of regions. It should also include enough of the genesis of the environmental forms so that the resulting knowledge and its use shall be based as much upon the processes of reason as upon memory. Minimum essentials in this list of environmental forms certainly should include introductions to the climatic regions of the world, the major land forms and the elements of mineral distribution, soils and natural vegetation types.

In the climatic studies the characteristics of climates and their distribution are permanent. Meteorology must, in this elementary presentation, be subjected to its interpretative function. Just what classification of climates is employed is not material. Probably the simpler it is the better. However, students should get not only a knowledge of the characteristics of climates but also a clear notion of the areal distribution of the regions and of their physical and spacial relations to each other. This can be done only by teaching climate. I am convinced that an attempt to teach climate to elementary students as merely one of the forms of the regional complex in a survey of the regional geography of the world, results in a miscellaneous and disconnected knowledge of climates and is to that degree a poor basis for the understanding of geographical regions. The same logic applies to the other forms of environment.

The second feature of the survey must be designed to impart a working knowledge of the major types of land forms that have general habitat significance. Here systematic physiography must be discarded. Description of the salient characteristics of land forms must be substituted, with just enough of genesis to serve as a basis for constructive thought. This does not mean that geography is getting its feet off the solid ground. It does not mean that the instructor does not need his systematic physiography. In my opinion he needs it as never before. However, the immediate objective is to enable the elementary student to interpret the essential nature of those land forms that experience shows us need most commonly to be employed in geography and that function most largely in human affairs.

How shall this type of land-form study differ from systematic physiography? Process must be subordinated to form. Technical terms must be reduced to a minimum. Lecture and recitation may

be permitted to develop process to the extent of the minimum essentials required to understand the forms. The laboratory must concentrate on an examination of habitat characteristics of land forms as exemplified by topographic maps of selected regions.

Studies in the nature and general distribution of mineral resources is, in detail, economic geology. Detail so extreme must here be omitted in favor of the broadest of well-substantiated facts so arranged as to introduce the student to the idea that the presence or absence of valuable mineral resources in a region is no purely fortuitous matter but is related to recognizable conditions. Laboratory may supplement lecture and quiz in this field thru the use of simple geologic maps.

In the studies of the major types of soils and natural vegetations, lecture and text must develop the broader aspects of interrelationship between climates and land forms and soils and in turn between all of these and the major types of natural vegetation that have influenced and do influence the habitat characteristics of regions. These studies need not be wholly subjective. Laboratory work may make them concrete by an examination of samples of soils from various world regions and of strongly contrasted types and horizons for at least a recognition of easily observable physical and chemical differences. Local field examinations may be made to contribute realism and motive to these studies.

In summary, it may not be too strongly urged that these studies in the natural environment are preliminary to the principal objective of the course; that the facts are to be acquired in the shortest possible time; and that they should be carefully sifted by mature geographers for the selection of such as will function in fact as well as in theory in the subsequent geographical studies.

THE EDUCATIONAL OBJECTIVE IN ELEMENTARY COLLEGE GEOGRAPHY

We come now to the major part of the elementary course in geography; that part which deals with the description of and the interpretation of interrelationship between the environmental and the cultural forms of parts of the world. To this task we are to devote from one-half to two-thirds of the time available. How shall the time be invested?

I take it as almost axiomatic that work for a liberal arts degree should not have technical information as its principal content. This rule certainly applies to an introductory course in geography in the

liberal arts college. The objective in such a course should not be information alone but also a way of thinking about the world. Such a course should provide not merely information but also a systematic method for the arrangement and correlation of facts of geographic significance. It should open a field for later enrichment by study, if the student goes on to subsequent courses in geography, or by the experiences of life in case he does not. It should afford a foundation upon which he may build a broad tolerance and sympathetic appreciation of the peoples and problems of other lands than our own. It should be designed to generate a type of thinking that is the antithesis of provincial.

Our problem involves two questions. First, what arrangements of the factual material of geography is best suited to the attainment of this broadly cultural objective, and second, the selection and arrangement of facts having been made, how may they best be presented to the students?

A Regional Treatment Most Satisfactory

With respect to the first of these problems I would without hesitation choose a regional rather than a topical organization of material as the more broadly cultural and the better suited to the education of the beginner. A regional treatment better presents to the casual student the peoples and problems of other lands. Here may be painted the picture of the life of people in its setting of the characteristic elements of site and situation. This appeals to the beginning student and it lays the foundation for the addition of facts gleaned later from general reading and obtained thru personal experience in travel. Also this presentation is better adapted to the needs of the student who proposes to specialize in the field of geography. It introduces him at once to the regional way of thinking, which is essentially geographical. It gives him the elements of a method which may later be developed into his own regional method.

This expressed preference for regional treatment may not be taken as an indication that I think topical studies in the field of geography do not, or at least may not be made to, add to the total of geographical training. Properly handled, the topics of the geography of the world's agricultural or of its industrial or commercial activities paint pictures that add to our understanding of regions. Always, however, they are incomplete pictures and usually they

have not high geographic quality. It is too easy for the textbook writer, for the teacher and for the student to digress, to slip off for the time into the pleasant and interesting by-ways of industrial process, agricultural method and commercial detail which often have no inherent geographic quality or interest. There is also the almost unavoidable tendency to discover relationships that do not exist and make interpretations that in the light of fuller regional knowledge are found to be ill-based. The topical method in an elementary course is also more likely to develop these unfortunate characteristics than is the regional method at the hands of the inexperienced or partially trained teacher of geography, of whom, almost unavoidably, there are some in college positions. By this I mean, the teacher who has no clear-cut geographical philosophy, or who fails to make his teaching practice conform to his philosophy. In such hands topical geography, like the general science now taught in the secondary schools, tends to follow the bent of the instructor. To some it becomes physiography, to some a means of demonstrating economic theory, to others a chance to develop the principles of history or sociology. A regional presentation may not entirely avoid similar unfortunate tendencies but certainly it is much easier to avoid them.

Having decided the important matter of fundamental organization in favor of a regional basis we are now confronted with the much more difficult problem of what to present to beginning students and how most effectively to teach it.

THE REGIONS MUST HAVE PRACTICAL MERIT

Our first problem of presentation is, of course, "What is a geographic region?" This is not a question for beginning students to wrestle with, but at least the instructor must have some notion of what his regions do and do not include. Here we shall find it hard to agree. Certainly no two geographers seem yet to have fully agreed on this subject. Of some things I feel very sure so far as it concerns the regions to be taught in a beginning college course. A geographic region suited to this need is not the so-called "natural region" which is fundamentally a physiographic-geologic-climatic region and usually quite overlooks the economic-historical-political implications of the cultural pattern. Neither are the regions I want to teach segments of the earth's surface in which the patterns of human occupancy are brought to focus thru the lens of

climatic unity or thru that of any one other single form in the environmental complex.

It is my belief that the regions presented to this elementary class should aspire to practical rather than to purely geographical merit. I sincerely doubt whether any geographer knows sufficient detail about the regions of the world to make generally acceptable and entirely logical regions based upon a complete analysis of all of the natural and cultural forms involved. This obviously is the only completely defensible geographical procedure. Yet I do think that practical regions can be made tho they may not stand the test of severe logic. And they will be useful regions. They will have the practical merit of some familiarity to the elementary student and of usability by the greater number who will not go on to advanced courses in regional geography. I refer to a primary subdivision upon the time-honored political basis with further division upon any convenient natural or cultural basis or combination thereof. This appears geographically inconsistent. Indeed I think that if the regions I would create for elementary use have any consistency it is their persistent inconsistency. I think there can be so much straining for geographic consistency in an elementary course as to destroy the practical and inspirational value of the instruction.

To further clarify my meaning I would say that I have not the slightest hesitation in swinging from one basis of classification to another if by that means I can bring to the liberal arts student some tangible ideas about the peoples and problems of other lands. Let us illustrate. Europe is undoubtedly the most difficult continent to teach upon a satisfactory regional basis. I do not doubt that it is done in advanced classes. In Africa, to some extent in the American continents, the forms of the natural environment have been so little subdued by human influence and the variations in cultural pattern traceable to political, historical and ethnic causes are sufficiently few that political regions may with some success be superseded by those which purport to represent the interplay of environment and cultural conditions. Not so with Europe. Here I would have not the least hesitation in using a political basis of organization or a physical basis or one of ethnic type or any combination of them. The main effort would be to instill a knowledge of the significant contrasts in European geography upon any basis that the elementary student can understand and think intelligently about. For example, I would indicate certain unities in the Baltic Plain but I would think

it very unwise to fail to recognize that it contains several unlike political and ethnic elements and to subdivide accordingly. So also I would recognize several types of environmental complexes in teaching France, but I would consider it unfortunate to stop there and to fail to picture the unity that exists because France is France.

This may suffice to make clear what principles or lack of principles would guide me in establishing a manner of presentation. There remains the question of what, how much, to present in an elementary course.

A World Survey with Varying Emphasis

It is clear to the experienced that no course, not even of ten hours per week for a year, is sufficient to permit of the development of the detailed geographical features of all parts of the earth with equal emphasis. How then shall we select the most valuable, how determine what is most useful to the liberal arts student? One popular answer to this question is the selection of the so-called type region as the basis for study and the reference of other regions to this type. Of this method I am frankly skeptical. I doubt whether, in the full geographic sense, when all of the necessary information about regions that should be assembled has been assembled, there exists any such thing as a type region, at least in the world sense.

My only practical answer to this question is to say that the problem may be solved by a great variation in emphasis and degree of detail. For example, in the progress of this world survey there should be studies of no less than three of the great industrial areas of the world in some detail, upon a complete geographic basis where possible but subdivided politically or ethnically or in any other way where necessary to give the completest picture. So also with the great agricultural regions. Just because the Chernozems of Russia and of North America have similar climates, soils and products is no basis for analyzing one and passing the other with a reference to the preceding as a type. It is upon the less significant parts of the world, those that have contributed least to the culture of the modern world, those of which an understanding is least important to a cultured man, that I would save time in this elementary course.

Laboratory Practice in Regional Geography

The above will indicate in brief what I would teach. Now, how should it be taught? Certainly not by lecture and quiz alone if any

sort of laboratory can be improvised. We can not take our students to the regions of the world but we can bring samples of the world to our students for analysis thru the medium of detailed maps. The ordnance and other surveys of many foreign countries are a mine of information. Road patterns, urban agglomerations, rural habitations, and, on some, even types of crops and other ground cover are shown in surprising detail in their relation to some of the conditions of site. Such studies when supplemented by pictures and statistics, correlated by an intelligent manual and supervised by instructors adequate to the task offer the elementary student a real opportunity. In return for a modest investment of time he may receive a fairly liberal understanding of people and their life, of landscapes and their meaning in at least the more significant world region about him.

THE INTRODUCTORY COURSE IN ECONOMIC GEOGRAPHY IN THE SCHOOL OF BUSINESS

JOHN E. ORCHARD
School of Business, Columbia University

Economic geography is a newcomer in the college and university. Very few courses date back more than twenty-five years and, according to my information, it was not until 1919 that the first professorship in economic geography was established in an American university. Tho the progress in the recognition of the field has been rapid and substantial, economic geography has not been fully accepted into the university curriculum.

POSITION OF ECONOMIC GEOGRAPHY IN UNIVERSITIES

Geography has a past—somewhat shady and rather difficult to live down. Whatever else they may have accomplished, the large flat textbooks rarely written by a geographer, and the orthodox teaching methods of the last generation or so certainly did not inspire in the grade and high school students any burning desire to carry further their study of geography. A revolution in texts and in teaching has occurred in the last decade, but a prejudice dies hard and the notion still persists that geography is only an elementary subject and not an especially interesting one at that.

A course in economic geography was introduced recently into one of the more liberal schools of social thought in New York City. It languished and attracted few students. Finally, the name of the course was changed from economic geography to descriptive economics. No change was made in subject matter or in the instructor, and now the course prospers. In fairness to the field, it should be stated that the instructor has had no training in geography.

Even in the school of business the position of economic geography is not unchallenged. In one of the most successful of the collegiate schools of business in the east, no geography is taught and in many cases the offering is limited to one or two courses given by teachers with inadequate preparation and the subject is often regarded as a sort of poor relative of some larger department. One frequently meets with the question: What has economic geography to do with business? And the business man continues to insist that he can get all the geography that he will ever need out of a Rand-McNally Atlas.

The teachers in the elementary and secondary schools can remove much of the prejudice against geography, but the responsibility for establishing the field firmly in the scheme of higher education rests with the university instructor. His success will depend first of all upon his preparation and little can be expected as long as teachers are recruited haphazardly from geology, economics, or history with no special training. Economic geography demands its own training, if anything more exacting than other fields of knowledge because of the complex and diverse nature of its subject matter. The success of the university instructor will also depend upon his knowledge of the extent of the field, upon his understanding of its aims and functions, and upon his ability to present the subject matter effectively.

DEFINITION OF ECONOMIC GEOGRAPHY

Geography is a comparatively new field and for that reason definition and limitation are much more essential than in an old and established field, the bounds of which are generally recognized. Definition is especially necessary since geography must draw material from so many fields and may easily be confused with those fields. There is probably no more important single requirement for the effective presentation of economic geography than a clear-cut definition and the searching examination of all material in the light of that definition before it is included in a course.

In the United States, geography is usually defined as the study of the relationships existing between living organisms and the physical environment. With such a definition for the general field, economic geography becomes the study of the relationships existing between the physical environment and man in the production and distribution of wealth. A careful testing of all material in terms of this definition will insure unity and meet the criticism that economic geography is little more than a hodge podge with no form or substance of its own. The insistence upon a definition and the adherence to it will do much to establish economic geography as a distinct field of knowledge. In the past, the criticism has been made, and quite justly, that geography encroached upon geology and physiography. The present tendency seems to be a swing in the opposite direction and geography is now claiming material that properly belongs in the field of economics or sociology.

SCOPE OF THE INTRODUCTORY COURSE

In the following brief outline are presented the principal features of the introductory course in economic geography as given in the School of Business of Columbia University. A more detailed syllabus with lecture topics and assignments was prepared for distribution at the December meeting of the National Council of Geography Teachers. Limitations of space have made it impossible to reproduce it here, but copies may be obtained by addressing the present writer. The outline of the Columbia course is presented here not with any idea of suggesting a standardized course of study but in the hope that our experience may prove to be of some value to other teachers of geography. The course has been developed in response to a certain set of conditions and is meeting those conditions successfully. It has been given for ten years and during that period, tho the basic outline has been retained, it has undergone constant revision.[1]

I. Agriculture and agricultural regions
  1. The Field of Economic Geography (Introductory Lecture)
  2. Agricultural regions of the low latitudes
    a. Equatorial forest regions
    b. Difficulties of developing low latitudes
      (1) Disease
      (2) Climate
    c. Organization for the development of the low latitudes
    d. Agricultural and pastoral grasslands
    e. Low latitude deserts
    f. High altitude regions in low latitudes
  3. The importance and influence of physiography in the physical environment
  4. The classification and geography of soils
  5. Agricultural regions of the middle latitudes
    a. Middle latitude weather and the weather map
    b. Mediterranean climate regions
    c. Humid subtropical climate regions
    d. Flood control, a problem of humid subtropical regions
    e. The corn belt
    f. The spring wheat belt
    g. The middle latitude dry pastures
    h. Middle latitude deserts
    i. Irrigation and reclamation of the dry lands

[1] The introductory course in economic geography in the School of Business, Columbia University, is now being given by Professors J. Russell Smith and John E. Orchard, Dr. Louis A. Wolfanger, and Mr. James W. Reid. During the past ten years Professor George T. Renner, now of the University of Washington, Professor H. H. Martin, now of the University of Cincinnati, and Mr. DeForest Stull, Associate in Geography, Teachers College, Columbia University, have also been associated with the department and have made contributions to the development of the course.

j. Puget Sound climate regions
k. New England climate regions
6. Agricultural regions of the high latitudes

II. Power and mineral resources
1. Water power
2. Coal and iron
3. Petroleum and other possible power resources
4. Other mineral resources
5. Mining and human societies
6. Conservation

III. Manufacturing, trade and cities
1. The geographic division of economic activity
2. Major manufacturing regions of the world
3. Major manufacturing industries
a. Iron and steel industry
b. The textile industries
c. The machine industry
d. Leather industries
e. Pottery industry
4. The geography of foreign trade
5. Ocean traffic and ports
6. The geography of the city

The course as here outlined is a required course in the School of Business and is usually taken during the sophomore year. It is not intended for the specialist in geography. For the advanced study of geography leading to the Master's degree or Doctor's degree, an organization, of which the Department of Economic Geography in the School of Business is a part, has been set up under the Dean of the Graduate Faculties. It offers a comprehensive list of graduate courses in all the more important fields essential in the training of a geographer, including courses on the geography of all the continents, courses in physiography, climatology, meteorology, geology, soil science, and the teaching of geography, and, for the specialist in any of the fields of geography, a wide selection of courses in economics, agriculture, history, anthropology, sociology, botany, and zoology.

The introductory course runs thruout the year with three meetings each week, a lecture meeting for the combined group and two discussion meetings for small groups of twenty to twenty-five. The weekly lecture presents material not readily available for assignment and provides the thread of unity and continuity for the course.

THE REGIONAL TREATMENT

It will be noted that there are three main divisions in the outline: (I) Agriculture and agricultural regions, (II) Power and

mineral resources, and (III) Manufactures, trade and cities. In the first division on agriculture, the regional method is followed, the agricultural regions being based, with some modifications in names and boundaries, on the climatic regions of the world as delimited by Jones and Whittlesey in their *Introduction to Economic Geography*. It has not been possible to extend the regional treatment to the other sections on power and mineral resources and on manufactures, trade, and cities, but it is hoped that eventually the course can be made, from beginning to end, a regional study with the world divided into geographic regions based upon the principal economic activities and not upon agriculture alone.

The criticism has been made that in the outline too much space is given to agriculture, especially since the course is intended for students of business. The criticism is perhaps justified to some extent, but agriculture is still the basic economic activity of man and agricultural products, if domestic animal products are included, constitute, it has been estimated, about 85 per cent of the annual primary production of the world. Agriculture supplies the bulk of the commodities entering world trade and a knowledge of agriculture and agricultural commodities is essential to the manufacturer, for from agriculture he draws many of his raw materials.

The space given to agriculture can also be explained as a compromise with necessity. To the pioneers in the development of the field of economic geography, the relation of agriculture to the physical environment was more apparent than the relation of other economic activities. It seemed to be a more fundamental relationship and more attention was given to its study and interpretation. The literature on the subject is abundant. Only recently has there been much consideration of the geography of manufacturing industries or of commerce and as yet the body of literature available for assignment purposes is scanty and not particularly satisfactory. The situation is improving and as a result of the work of some of the younger geographers, we are finding it possible each year to expand somewhat the sections on manufacturing and trade.

PRESENTATION OF THE ENVIRONMENTAL BACKGROUND

In developing an introductory course in economic geography, a number of perplexing problems in the reconciling of conflicting needs and conflicting viewpoints must be solved. There is first of all the problem of the distinctly heterogeneous background of the

students. It is perhaps more accurate to refer to it as the absence of background. Some few of the students coming to the introductory course have had previous courses in geology, physiography, or geography of sufficiently recent date but most of them bring with them little more than the memories of the grade school study. Climate, physiography, soil and the other elements of the physical environment are to them mysteries. It is obviously impossible to undertake any study of relationships without an understanding of the environment. An elementary course in geology or physiography as a prerequisite to the study of economic geography might perhaps seem desirable, but any insistence on such a requirement would inevitably displace economic geography as a school of business subject. The introductory course in economic geography must supply its own background. It cannot limit itself to the study of economic relationships, but must also become an elementary course in physiography, climatology and soil science, even at the risk of doing considerable violence to a rigid interpretation of the definition of the field. It rests with the instructor to make clear the importance of the background and to place the emphasis upon the interpretation of the relationships.

The Columbia course has made its most important contribution to the teaching of economic geography in its method of presenting the study of the elements of the environment. The orthodox arrangement is to devote the first semester to the environment and the second to commodities and occupations, making two almost distinct courses. We have brought the environment and the economic relationships together and have interlocked them. Immediately after the discussion of a particular element of the environment, the commodities and the occupations of man related to it are presented.

In the section of the outline on agriculture and agricultural regions, it is the usual procedure in taking up a new region to devote the first discussion-meeting of the week to the description and explanation of its climate. In the lecture, there is no repetition of the assignment. It is devoted to the description of the region and the people, their occupations, customs, and manner of living. In the second discussion-meeting, the commodities produced in the region are presented. The same procedure is followed thruout the course as far as circumstances permit.

For such a method of presentation, no single textbook is available. Two books must be used concurrently. For the elements of

the environment, we have selected Jones and Whittlesey's, An Introduction to Economic Geography, Part I, and for the commodities J. Russell Smith's, Industrial and Commercial Geography. Many other books and articles in periodicals are used for library assignments. They make possible a more flexible course and permit the use of fresher material and they also familiarize the student to some extent, with sources.

The following detailed syllabus for three weeks early in the course will serve to illustrate the method of treatment:

FIRST WEEK

Assignment for first discussion-meeting

Salisbury: Physiography. Temperature, 445-555, 458-466; Moisture, 493-498; Pressure, 505-509

Jones and Whittlesey: An Introduction to Economic Geography. Rainy Low Latitude Type of Climate, 6-7, 103-109, Figures 11, 12, 53-68

Lecture: Equatorial Forest Regions

Assignment for second discussion-meeting.

J. Russell Smith: Industrial and Commercial Geography. Tropic Possibilities, 700-705; Tropic Forests, 482-485; Cacao, 330-335; Rubber, 573-584

SECOND WEEK

Assignment for first discussion-meeting

Industrial and Commercial Geography: Cassava, 126-127; Banana, 127-131; Coconuts, 184-186; Cane sugar, 297-313

Lecture: Difficulties of Low Latitude Development

Assignment for second discussion-meeting

Ellsworth Huntington: Weather and Civilization, reprint from *Bulletin of Philadelphia Geographical Society*, January, 1916

THIRD WEEK

Assignment for first discussion-meeting

V. M. Cutter: The Caribbean Tropics in Commercial Transition, *Economic Geography*, October, 1926, pp. 494-507

Lecture: Organization for Low Latitude Development.

Assignment for second discussion-meeting

The Plantation Rubber Industry in the Middle East, U. S. Bureau of Foreign and Domestic Commerce. Trade Promotion Series, No. 2, 1925. Figures 6, 7, 8; all pictures on pp. 21-46; text, pp. 47-53, 157-188

The study of the equatorial forest regions opens with a description and explanation of the climate. It is followed by a discussion of the people living in those regions, their occupations, the peculiarities of their manner of life, and the principal commodities, such as the cabinet woods, rubber, cacao, cassava, coconut, cane sugar, and fruits. In the next two weeks, the problems that face the white man in exploiting the low latitude regions are presented. They

include the combating of tropical diseases, the effect of the climate on human energy, and the necessity of large scale organization for effective exploitation.

The arrangement that we have adopted makes possible the introducing of the essential background of physiography and climatology without violating the definition of economic geography. It places the emphasis on the relationships, where it belongs in a course in economic geography, and not on the environment. It has the decided advantage of demonstrating clearly the function of the environment in man's activities. The relationship can be established much more conclusively than is possible if the environment is presented one semester and the commodities and occupations several weeks or months later, an important consideration in a school of business where the students are inclined to be skeptical of the practical value of any course.

Advantages of the World Survey

The second difficulty encountered in the developing of the introductory course is its rather indefinite position in the program of study of the students. Some few go on to the more advanced courses in economic geography, namely, to the continent courses and the research courses, but for many of the students the introductory course is their one and only course in the field. For that reason, it must serve a dual purpose: it must be a foundation course for more advanced study and it must be a complete unit in itself and give a general survey of the possibilities of the field. The world survey meets this two-fold need much more effectively than a course on a limited area such as a continent. It acquaints the student with the principal geographic features of the earth, if it is to be the only course, and if it is to be followed by other courses, it forms a very necessary background for the study of the individual continents.

Cultural Contributions of Economic Geography

The development of an introductory course in economic geography is further complicated by the rather divergent viewpoints of students and faculty in the schools of business. The student demand is for the practical course of immediate application to business, a course that will provide information with a dollars and cents value and that will point toward some specific position in the

business world. The faculties of most of the schools of business are agreed, I believe, that the tools and detailed technique of business can best be acquired in business. They hold that it is the function of the collegiate school of business to build a cultural background and to broaden the outlook of the student so that he will have some understanding and appreciation of the business structure beyond the limits of his own job. It is also the function of such schools to emphasize the social significance and implications of business.

A few years ago, during the construction of a new building for the School of Business of Columbia University, a faculty member from another department was heard to describe it as the building for the production of Babbits. The remark expresses a current opinion of business men in general and perhaps also an opinion of institutions intended for their training, but it most certainly should be strongly resented by schools of business for it is their ambition that their graduates shall have few of the characteristics of Mr. Lewis' hero. It is that ambition that governs the planning of the curriculum.

When the School of Business was organized at Columbia University, several courses were included in the curriculum that were primarily cultural and background courses and one of them was economic geography. Its relation to business is less apparent than the relation of accounting or finance or banking and it has had to face considerable opposition from the student insistence upon the practical. It is not always easy to convince the freshman or sophomore that economic geography forms an essential part of the training of the business man.

In developing the full cultural possibilities of economic geography, we have followed Homer who epitomized his typical cultured man as one who knew "the ways and faring of many men." Man seems always to have been ignorant regarding his neighbors and to have had a provincial outlook. To the Greeks, all other peoples were barbarians. The name barbarian was applied to the Americans by the Japanese when Commodore Perry forced the opening of their country in 1853. Americans almost boast of their ignorance of the rest of the world, but it is an ignorance shared even by the cosmopolitan continent of Europe. Not long ago, a French royalist publication, in an effort to prove that the people were ignorant and therefore unfit to rule, addressed an appeal for

assistance, signed with a false name, to members of the Chamber of Deputies on behalf of a purely fictitious country in Europe. The appeal described in moving terms the hardships of the people and their wrongs at the hands of the oppressor and reported the wanton burning of the country's principal city—a city not to be found in any atlas or gazetteer. The ruse was successful and several members of the Chamber came forward with offers of assistance. We have attempted to acquaint the students with the map of the world, to give it some significance and to develop a sympathetic understanding of other peoples in the hope of making a beginning, at least, in the destruction of provincialism and the weakening of prejudice.

Practical Value of Economic Geography

Tho there can be no question of the importance of economic geography as a cultural subject, it is also an intensely practical subject and more emphasis must be placed upon that aspect if the field is to make any substantial gains in higher education. It is becoming more practical every year with the fundamental change that is taking place in the economic position of the United States. A self-sufficient nation largely independent of the rest of the world economically and content to sell food and raw materials can afford to remain ignorant of other countries. But a nation searching in all corners of the earth for raw materials and for markets for its manufactured goods must possess a knowledge of the world. The United States is no longer predominantly an exporter of raw materials. Finished manufactures, manufactured foodstuffs, and semi-manufactures now constitute over 65 per cent of the value of our export trade and the principal imports are raw silk, crude rubber, sugar, and coffee. The expansion of American shipping and trade, the investment of American capital abroad, the enterprise in foreign fields of such concerns as the United States Rubber Company, the Standard Oil Company, the Firestone Rubber Company, the United Fruit Company, Henry Ford, and the National City Bank of New York have all served to give a practical value to knowledge that was formerly considered only cultural. The work that is being done by the Geography Section of the United States Bureau of Foreign and Domestic Commerce is further evidence of the demand in business for information that only the geographer can supply. Departments of economic geography, valued

only for their contribution to the cultural atmosphere of the schools of business, must accept their new responsibility. A knowledge of the world and its possibilities has become an essential part of the equipment of the business man and it is the task of the economic geographer to supply it.

IMPORTANCE OF IDEAS

However practical economic geography becomes it must never lose sight of ideas. If care is not exercised, the introductory course may easily become a factual study of commodities, largely meaningless and certainly monotonous. There are many commodity courses in American colleges and universities masquerading under the name of economic geography tho any mention of the environment and its importance is purely incidental. Facts seem to delight many students and they are never so happy or so convinced that they are getting something worth while as they are when copying into their notes copious statistics on production, prices, imports or exports. In a recent letter criticising our course, the anonymous student writer made the demand that the students 'should be told the facts simply and straightforwardly.'

A body of factual knowledge may have its place in the equipment of a student, but facts are ephemeral. They should be introduced into a course only to build up and illustrate a body of ideas and principles. For example, a table showing the world production of crude rubber is of much less significance than an understanding of the reasons for the concentration of the plantations in southeastern Asia. The method of presentation adopted for the introductory course at Columbia lends itself especially well to the arrangement of facts about ideas and principles. A few years ago an officer of one of the large New York banks made a survey of the School of Business of Columbia University. Tho he was a banker, he selected the course in economic geography for strong praise because of its success in subordinating facts and advancing principles.

THE STUDY OF SOURCES

The business man will have need of facts and the course in economic geography should introduce the student to the more important sources from which facts can be obtained readily when they are required. The course should include exercises and assignments in such sources as the Yearbook of the Department of Agriculture,

Mineral Industry, Mineral Resources of the United States, Commerce Yearbook, Statistical Abstract, Commerce and Navigation, Commerce Reports, and the statistical reports of the League of Nations. The more detailed sources on specific countries or commodities can perhaps be presented to greater advantage in the advanced courses.

SUMMARY OF AIMS

To summarize, the introductory course in economic geography should be a study of the relation to his environment of man's activities in making a living; it should provide the environmental background for that study and explain the functions of the environment in the production and distribution of wealth; it should present a world survey of the production of the principal primary commodities, the distribution of the principal industries, and the movement of world trade; it should give brief consideration, at least, to the principal problems of a geographic nature such as flood control, irrigation, drainage, conservation and the marketing of agricultural produce; it should equip the student to make more intelligent use of the earth and to penetrate into the pioneer and marginal lands; and it should emphasize ideas and not facts. And economic geography should not forget its cultural mission. It should give meaning and significance to the map of the world; it should develop a sympathetic understanding of other lands and other peoples and thus contribute to the dissipation of provincialism and prejudice.

FILLING IN THE MAP

The Freshman Work in Geography at the University of Michigan

PRESTON E. JAMES
University of Michigan

Filling in the map, to borrow the apt phrase of one of the author's colleagues, is the substance of the freshman work in geography at the University of Michigan. For the last eight centuries or so geographers have been busy drawing on maps the distribution of land and water, the primary geographic facts of the face of the earth. This work, now almost complete, has given us the outlines of the continents, together with a skeleton of rivers and political boundaries. During the last century the work of filling in the map has begun in earnest. The distribution of landforms, soils, native vegetation and animals, and the distribution of man and the works of man can now be sketched in general terms for the world as a whole, and in detail for a few regions where chorographic studies have been carried thru. Our objective, then, is to recreate in the symbols of our discipline, namely maps, diagrams, and words, the expressions or aspects of the face of the earth, and to interpret these scenes in terms of the relative distribution of the significant elements of landscape and in terms of a stage reached in a process of continuous development.

THE LOCAL SITUATION

In approaching this objective, or any other, the local situation or the status of the course plays an important part in determining the actual character of the work. At the University of Michigan geography is classed as a social science, in a group with history, economics, political science, sociology, and philosophy. The student usually elects work in the three groups (language and literature, natural science and mathematics, and social science) during his first year. In the social science group he has a choice between history, political science, and geography, these courses being also open to sophomores, but not to juniors and seniors. The geography course is smaller than the other two, having an enrollment each semester in the neighborhood of 300.

The freshman course serves two purposes: to give a general cultural view of the field of geography for those who intend to take no other work in the subject; and to provide a fundamental frame-

work for those who take further work in the department. Entrance to advanced courses in geography is either thru the two semesters of freshman work, or thru two semesters of economic geography, open to all but freshmen. The first year course is divided into recitation sections of about 25 students each, which meet four times a week. The work is conducted with the aid of maps, a textbook, and outside readings in the library.

THE CONTENT

There is no need here to dwell on the inadequacy of classifications. Any generalization of facts as complex as those of landscape contains a considerable margin of error. Yet some method is necessary whereby the enormous complexity of the face of the earth may be simplified so that its broader outlines may be comprehended. No classification should be judged on the basis of its reality, for all classifications are at best only diagrams of reality. The only basis of judgment lies in the question of whether or not they serve the purpose for which they were created.

As a matter of expediency to aid in filling in the map, the face of the earth has been divided into eight *groups* of landscape. These groups are essentially "stage settings," on which the human drama is to be unfolded. The groups are expressed in terms of land surface and vegetation. The eighth group includes the high mountain lands of the world; the other seven represent lands of lower relief, and are divided on the basis of the natural vegetation which, in its broader aspects, is a reflection of climate. The groups are:

I. The Dry Lands
II. The Tropical Rain Forest Lands
III. The Tropical Savanna Lands
IV. The Subtropical Dry Forest Lands with Summer Droughts
V. The Mid Latitude Forest and Prairie Lands with Mild Winters
VI. The Mid Latitude Forest and Prairie Lands with Severe Winters
VII. The Polar Lands
VIII. The High Mountain Lands

The human occupance of these stage settings is in various degrees of intensity or closeness of adjustment between the forms of the occupance and the forms of the fundament.[1] Four degrees of intensity of occupance may be recognized, and these are termed

[1] Terms suggested by: D. S. Whittlesey, Sequent Occupance. *Ann. Ass. of Am. Geogr.*, Vol. 19, 1929, p. 162 ff.; and J. B. Leighly, The Towns of Mälardalen in Sweden. Univ. Calif. Publ. in Geog., Vol. 3, 1928, p. 3

stages of settlement. The primitive stage is found in areas where the landscape has not been significantly modified by human occupance. The early settlement stage occurs in areas where occupance is resulting in important changes in the fundament, but in scattered units, in the presence of abundant free land, and with little adjustment in detail to the facts of the physical setting. Still other areas have passed beyond the early stage to a condition in which relatively little unoccupied land remains, yet in which there is only a broad adjustment between the forms of settlement and the physical setting. This is the middle settlement stage. Finally the advanced settlement stage is found in regions with relatively dense populations, in which there is a close adjustment between the facts of the occupance and the facts of the fundament, in other words in which each change in an element of the physical setting is mirrored in a corresponding change in the way man is occupying the area.[2]

There is little correlation, except in very general terms, between the actual density of population per unit of area and the stages of settlement. The oases of group I, for example, seem to have been in the advanced settlement stage since the earliest periods of human occupation; the actual density of population supported by the oasis depends to a larger extent on the culture of the inhabitants. Euro-American culture, with its emphasis on the machine, has raised the actual densities of population in almost all the regions into which it has extended its influence, reaching a culmination in the big city.

Nor is there a close correlation between population density and the landscape groups. Altho it is true that almost 75 per cent of mankind lives in the regions of group V, still there are large areas of group V relatively sparsely inhabited, and many of the areas of densest population are in other groups, as in I and II. Here again the missing ingredient is the culture. For people with different cultures occupy stage settings of very close similarity in very different ways. The reality must be brought out by showing how the same type of fundament is occupied differently by different cultures, and how cultures, themselves, are modified as they are carried from one stage setting to another.

Then there are patterns of distribution to be considered. Landscape morphology has been greatly overlooked in this country, and yet plays an extremely important part in determining the charac-

[2] Compare the settlement stages in: A. P. Usher, The History of Population and Settlement in Eurasia. *Geog. Rev.*, Vol. 20, 1930, p. 110

teristic expression of the face of the earth. How do forms of the human occupance mark the surface?[3] These patterns of occupance may be studied in rural areas, or in urban areas where they reach their most complete development. Also, even the groups are distributed in a broad way over the face of the earth according to a fairly definite pattern or arrangement, as controlled by the distribution of climates and by the major orographic features of the earth's surface.

It is not sufficient, however, to deal in generalizations without a very considerable body of factual material—neither from the point of view of filling in the map, nor of developing the thought process among the students. Detailed pictures of specific areas within the several groups are needed. Just as photographs are used to illustrate an article, so a number of regional or chorographic studies are used as illustrative or representative of conditions within a group. As in the case of photographs, these studies contain much that is not of direct value to the main theme, and they contain some elements which even seem to contradict the main theme. The student must be made to learn that "all generalizations are wrong, even this one." A healthy skepticism, hard as it may be on the instructor, is a desirable residuum of the educational process.

CONCLUSION

The course thus briefly outlined is still in the experimental stage. It represents an essentially new combination of materials. It differs from the usual course in economic geography in that emphasis is not placed only on those facts which have to do with man's problem of making a living, but is placed, rather, on those facts of the "areal scene" which appear to be most significant in determining the characteristic aspect of the region. This does not mean at all that the course deals chiefly with physical geography. In mountain lands, to be sure, the configuration of the surface may be of dominant importance; in almost any primitive landscape the natural vegetation is of outstanding importance; but the more complete is the transformation of the fundament under the hands of man the more important must be the facts of the human occupance. Filling in the map consists of knowing what regions are like: of understanding the physical make-up of the stage setting, and of knowing what actors are on the stage, and what parts they are playing.

[3] See J. Brunhes, Human Geography. pp. 375, 392-395. Chicago. 1920

INTRODUCTORY COURSE IN GEOGRAPHY IN THE TEACHERS COLLEGE

B. H. SCHOCKEL
State Teachers College
Terre Haute, Indiana

DEFINITION

The limitations made in the assignment and its implications are as follows: (1) The introductory geography course shall be considered as a part of a four-year college course. This eliminates discussion of the geography in the two-year and three-year courses for students who need highly practical short-cut training for immediate teaching. (2) The introductory geography course shall not be considered as being designed specifically for students majoring in geography. This eliminates discussion of a basic course in geography designed as one of many closely articulated courses in that subject to produce geographers especially trained to teach geography (The embryo-geographers would not be barred from such a course, however). (3) But the students chiefly to be kept in mind are those who take one or more courses in geography, not as a major, but as a part of their general education or to supplement training in their major field, as for example in history. (4) Such students, however, may be called upon to teach some geography in the grades or in the high schools along with other subjects. In fact a large proportion of the geography taught in those schools is by teachers with such training. (5) The introductory geography course shall differ more or less from a somewhat similar one in a non-teacher college, especially in class room procedure, and professionalized subject matter, with the teaching of children in mind.

INTRODUCTION

In this introduction no one course and no one combination of methods are to be held solely capable of meeting successfully the limitations herein set. Success in such a course depends largely upon the instructor, the students and the specific situation. Such courses have been successful when based upon a liberal treatment of geology, or physiography, or commerce, as well as when based specifically upon geography.

By way of introduction it is stated that this paper is based upon experimental experience involving a sort of perennial hope for

complete success. It is not based upon questionnaires. Nor is it a digest of the latest university ideas. Essentially every highly trained graduate of a university, inexperienced in teaching, seeks to pass on to his students what he has learned in the university. That is to say, such an instructor is dealing in what has become second-hand stuff. But there comes a time, if he is a high class student as a teacher, when he himself creates something of his own specifically designed for his classes.

POSSIBLE APPROACHES

Among the approaches to such an introductory geography course as has been defined herein the following seem most promising: (1) physiographic, (2) economic, and (3) regional. Experimental and resourceful instructors are likely to run the gamut of all three, in the order named, and emerge cognizant of the advantages and disadvantages of each, but wholly satisfied with none.

PHYSIOGRAPHIC, ECONOMIC AND REGIONAL APPROACHES

An outstanding advantage of (1) or (2) or (3) is that each has the clarity of a melody in contrast to the complexity of a symphony. Each has a field somewhat sharply limited. Another advantage is that each of the three lends itself rather well to scientific treatment.

A distinct disadvantage of each of the three is that each deals largely with only one aspect of geography. That is to say, each is a one-sided, fragmental, specialized approach to the subject and as such falls short of being the liberal introduction to geography required by the definition of the course under discussion.

Second-hand Geography. Geography in the public schools is of vital interest to the teacher college because the latter trains teachers for the former.

Now specialization in the introductory geography courses, open to all students in the teacher college, naturally leads to highly specialized geography courses in the public schools, both the high schools and the grades, because the teacher most likely attempts to teach in the public schools the geography which he learned in the teacher college. This is because geography teachers in the public schools for the most part find it difficult to create their own product for their classes largely owing to over-standardization, lack of opportunity and in many instances laek of adequate training in geography. Geography teaching in the public schools is assigned

most frequently, not to a graduate who has majored in geography, but to one who has taken in college the introductory geography course or courses only. A more liberal introductory geography course should lead to less specialized courses in the public schools.

Effect of Over-Specialization. As shown by the textbooks used, the geography courses in the junior and senior high schools exhibit a high degree of analysis and specialization. Note, for corroboration, their names: commercial geography, economic, business, regional, political, human, and physical. This has helped to bring about unfortunate results. For in this age of crowded curricula and coalescence of subjects, the actual existence of geography has been jeopardized in many high schools. In despair of choosing among the highly specialized geography courses, and in ignorance of the entirety of geography, many high schools have dispensed with all geography or dismembered it and have given physical geography to the physical sciences and general science, and other fragments, vaguely defined and understood, to the social sciences.

It is no accident that in a certain state, in an enthusiasm of curricula making, a committee of physical scientists was assigned the task of shaping physical geography to be taught as one emasculated unit of physical science, and likewise a committee of social scientists was delegated to absorb what it wished of or knew about, human and economic geography. In discussion in the social science it was assumed that the history and economics professors in the teacher college would teach such "geography" to their students, none other being deemed advisable for history students.

The situation in that state is due in part to the huge mergers being achieved in the social sciences, general science, home economics, health education, business education, etc. But in mergers the fragments or loosely bound units are most likely to be engulfed. Geographers invited the disaster when they split introductory geography into separate units and treated them as isolated entities.

Geographic entirety vanishes when physical geography becomes a Cinderella in the halls of physics or general science, when human geography becomes an agglomerate unit of the social studies, and commercial geography is taught in the department of commerce. Geographic entity is likely to be vague in the mind of a student who takes only a few courses in the subject when each of them is highly specialized. Accordingly we are intrigued toward a high class

merger in the fields of geography—not an agglomeration, but a coherent blending; there is the lure of introducing the novice to geography by means of a sort of "geographic symphony," despite its many difficulties.

THE MORE LIBERAL APPROACH

It seems clear that some sort of liberal approach is needed. Let us therefore consider the idea of a "geographic symphony."

A Liberal Course. A "geographic symphony" is not an orientation course; nor a geographic encyclopedia; nor is it a topical course in systematic geography. It is a unified interweaving of various geographic threads to present the nature of geography, expressed in a concrete portion somewhat as a symphony introduces us to music even tho it be but one concrete piece of music. In the "geographic symphony" elements of physical, economic, social, and political geography are all woven about some one theme.

Basis for Organization. The theme may be physical geography with the other elements woven about it. Or the theme may be economic geography, or social, or political. However, in the writer's judgment, the best theme for the introductory course under discussion is a small number of well selected regions or countries, for the following reasons: (1) Regions and countries lend themselves most easily to the development of the space and place concepts which are unmistakably geographic. (2) Physical, economic, social and political geography, all interwoven, actually exist in regions and countries. Hence each region or country can be shown to be peculiarly real and individual. (3) Regions and countries are the most widely used units of geography in the public school (particularly the grades) in which teach later most of the students who take the introductory geography course in the teacher college. Probably the country is a better theme for the introductory course than the region, because of the basic current importance of the nation and nationality in our modern life. But because regions can sometimes be studied as part of a country, or vice versa, an introductory course might utilize each as needed.

The Country Basis. Let us assume that a small number of well selected countries, and perhaps regions, constitutes the chief basis of the introductory course, and that, in the study of each country or region are to be interwoven elements of physical, economic,

social and political geography. With children there must be no wide gap of time between the studying of cause and of effect.

The countries can be so selected that an important concept of the modern world can be developed as well as important elements of the various phases of geography. The chief emphasis can be put upon Where? What? Why? How? In each case the continent can be studied after its selected countries have been treated.

Objectives of the Introductory Course. The following objectives are stressed: (1) The country is made to stand out as being real and unique. (2) Certain elements of physical geography are taught, thru concrete selected studies of those phases of the country's physical geography which are well developed and which have been shown to be important to it. Likewise, certain elements of economic, social, and political geography also are developed from the study of concrete, important aspects of such geography which exist in that country and which have been shown to be important to it. (3) Aside from a brief study in the use of geographic tools, a student learns to use the tools largely when and wherein they are needed to receive, convey and discover geographic facts, principles, and concepts. The immediate business in the class room is geographic knowledge and training in assimilating, expressing and discovering it.

Science and Art in Introductory Geography. We are all agreed that the introductory course should be scientific. In addition to its being scientific it should be artistic also because art makes absent things seem real; art creates the illusion of reality; and art has much to do with the question "How?"

Illusion of Reality. Let us consider the art side of the introductory course. Most students and professors have never seen all of our country, and no human being has ever seen, all at once, all of the physical United States except thru the imagination. Furthermore, no person has ever known the total, real physical-historical-human organism which is our country except thru studious imagination. Real America cannot be brought into the class room. Yet thru the artistic use of words and material at hand it is necessary that there grow in the minds of the students an illusion of that reality which is the United States.

With this goal in mind let us examine the technique of the artist for useful hints. A painter places daubs of color on canvas in such a way that in our minds grows an illusion of a real scene. The

novelist uses words in such a way that the characters are discussed and say things and do things. Thus in the mind of the reader the characters take on an air of reality. Indeed the illusion of their reality often becomes so strong in our minds that such non-existant, non-present characters are more intriguing to us than real people.

Means of Suggestion. May I suggest that the technique of the artist constitutes a hint to the scientific geography teacher who has sufficient insight to desire to become an artistic teacher also? That is to say, a greater teacher than either a scientific one or artistic one, a sort of teacher greatly needed in the introductory course. The illusion of the reality which is the United States cannot be achieved fully by maps, pictures, diagrams, statistics, descriptions, principles, problems and relations, alone. The heart of the artistic achievement is largely a matter of suggestion and it is beyond the realm of minimum essentials, objective tests, etc. One approach is thru continuity of action. Our country tends to seem real when we behold something of the changing relations between its physical aspects and its life, especially its inhabitants and their culture organisms such as commerce, all evolving, and all together constituting, somehow, an evolving unit. This continuity of evolving action changes burdensome encyclopedic material into something "alive." Another plan for achieving suggestion is the use of locality novels, travel stories, descriptions, and more serious interpretative literature. A third approach is thru illuminating characterization. Thus, in the mind of the student grows an illusion of the real United States, as it were a "face" for our country, distinctive and unique among the other geographic "faces" of the world.

Such a goal is as extraordinarily intriguing, dishearteningly illusive, and as valuable, as is a good piece of literature. Such a course is not for pedantic people. It cannot be put down fully on paper as a course of study or a syllabus because it exists only when instructor and students are in action, utilizing materials.

The Liberal Course in Some Detail

Perhaps it would be profitable now to think somewhat concretely about some such introductory course in "symphonic geography" in which various phases of geography, meaningly revealed in the study of a few countries, constitute a unified introduction to geography. To change the figure, various phases of geography are discovered as living tissue functioning in country-organisms.

In this assumed introductory course, after a prelude dealing with the use of geographic tools, the work proceeds to the study of a country. Great Britain makes a satisfactory first unit for many reasons. (1) It is a definite unit. (2) It is physically complex but sufficiently small to be comprehended fairly easily. (3) Its story is fairly discernible, not being hopelessly entangled with that of contiguous countries. Thus the physical factors can be fairly easily isolated. (4) Its history has been successful in that many of its objectives have been achieved to date. (5) Its long evolution thru many stages makes of it an introduction to Europe and a measuring rod for comparison and contrast in the study of other units.

In this assumed course, the treatment of Great Britain is built about three main threads: (1) The story of how Britain has grasped its physical opportunities, culminating in sifting out those physical features and resources which have been most essential. (2) A study of these physical features and resources as evolving phenomena, functioning geographically in that organism which is Great Britain. (3) A geographic interpretation of life in Great Britain. This involves a study of the distinctive traits of the people and the creations of the people, such as farmscapes, industrialscapes, population centers and conveyance ways, all beheld as evolving functioning organisms with geographic relations. Thruout the study an attempt is made to comprehend the realities in items (1), (2) and (3) as constituting relative parts of an evolving unity.

Other illuminating threads are discovered for each of the other countries studied. As the course progresses all countries studied emerge more and more clearly thru comparison and contrast. Also as the course progresses there emerge various phases of geography as principles or elements, all together interacting as a unified functioning reality. After the selected countries of each continent have been studied there follows a study of that continent as a unit. The last unit is world wide in scope.

CONCLUSION

Some such liberal introductory course is needed. Such an introductory course would be complex. But geography in reality is complex. Such a course is not logical; but we rarely teach children thru the logical approach.

GEOGRAPHY ESSENTIAL*

HELEN M. STRONG

Chief, Geographic Section, U. S. Department of Commerce

Instead of the longer subject given on the program, will you think with me of the simple theme "Geography Essential"? Not geography essential in a course of study, but geography essential for getting the most out of the vacation trip, for carrying on domestic and foreign trade, for understanding the context of the daily news, and for intelligently directing domestic and foreign activities of our Government.

The conviction back of these statements is the outgrowth of several years of daily cooperation along geographic lines with the business world, engaged in enterprises ranging in value from a few hundred dollars to many millions. In this connection one fact should be emphasized. Similar problems always have come to the Department of Commerce, but it remained for a trained geographer to make the geographic contribution paralleling and supplementing that of economic and financial experts, and to analyze the problem from the geographic point of view.

TRAINING NECESSARY FOR TEACHING

The connection of these remarks with the teaching of geography is obvious. Only a teacher, trained in geography, can give the students a geographic appreciation, and only geography itself can train the student in geography. We teach physics by teaching physics, German by teaching German not French, and geography by teaching geography.

When a child comes home from school with a monthly report of 50 in arithmetic, his father is liable to be severe with his offspring, and even go over to school, consulting with the teacher as to Johnny's difficulty, because *arithmetic* is *important*. He is not liable to become nearly as excited if the grade is low in geography. He will only laugh if his boy says Buenos Aires is a tropical city, even if, perchance, he happens to know his child is wrong. It is as serious a mistake as to say that 6 plus 4 equals 13. If he but knew it, geography touches life at many more points than arithmetic, and mis-

* A talk before the National Council of Geography Teachers, Columbus, Ohio, December 28, 1929.

information along geographic lines, or lack of information in geography, is responsible for more than one serious loss in business, failure to get full value returned on money invested for a vacation, and for a restricted provincial point of view in world problems.

Several years ago it was my privilege to teach a summer course in geography at Northwestern University. On the first morning, as I looked over the class, I was impressed by the prosperous, mature gentleman who sat about three rows back on the middle aisle. It was not long before I discovered that he was a Chicago business man. He and his wife—there were only the two of them—traveled much, but he felt continually handicapped because he could not appreciate fully what he was seeing. One day upon looking at the summer school catalog he discovered my course in geography listed for eight o'clock in the morning and decided to enroll for it. Each morning this Chicago business man spent an hour in a geography class and then went on to his office in the city. He was getting what every boy and girl, and university student may obtain in his geography classes. For economic geography in all its aspects from topographic thru regional, commercial and climatic geography will give an appreciation of the world in which we live which means far greater enjoyment day by day and greater enjoyment in travel. This purely cultural return should by no means be overlooked, for it is as significant to the enjoyment not only of travel, but also of books, literature, and even music, as is an appreciation of some of the great literary masterpieces.

GEOGRAPHIC KNOWLEDGE NECESSARY FOR BUSINESS

A geographic background is essential for an interpretation and understanding of the world news coming to us daily in the evening paper, and for an appreciation and an intelligent interpretation of the great trend in modern political developments. To one who knows no geography the names Peiping, Iraq, İstanbul, Verhoyansk, Chunking, Karachi, and Johannesburg, are simply names of cities or regions. To the geographer it is different. In the first place upon reading the name "Peiping" he knows that it means famous old "Peking" whose name the Nationalist Government of China has changed to a much older one. In his mind he sees the great North China plain stretching southward from the ancient city, and the mountains reaching away to the westward. He knows what kind of country surrounds this capital. He can visualize the great Man-

churian plain stretching northeastward, to which so many people from overpopulated North China have recently migrated in one of the greatest human movements of history.

The word Iraq suggests the great arid lands surrounding the Euphrates and the Tigris, and the rich oil fields which have made that country a prize whose control was sought by more than one foreign nation. To him Chunking is not simply a name, but it is a city far up the Yangtse River in the midst of a populous area, isolated from the sea coast by miles of mountain and lowlands, almost untouched by road and railroad, and for which the only means of communication with the Pacific Ocean, is along the Yangtse thru its deep gorges, and lower reaches.

In short, to the geographer the news of the world has a concrete background. He will instinctively compare and contrast the regions about which he reads with certain areas in his own country, and he will travel in fact or in actuality thru foreign regions. If he is interested in export trade, he will see in some of the facts he reads specific items bearing upon his business problems, and he will be able to relate them in significant manner.

To the business man engaged in nation-wide or foreign enterprise, geographic knowledge is absolutely essential. When in Portland and Seattle a few months ago, it was my privilege to be the guest of several luncheon clubs, composed of the foremost bankers, exporters, business men, and manufacturers on the Pacific Coast. They were more than interested in the services which a geographer could render to them in their business.

The Geographic Section Used by Business Men

The services of the Geographic Section have covered a wide range of geographic problems. A manufacturer of national and international reputation contemplated erection of a foreign branch plant. He of course came to the Department of Commerce for information as to labor supply, wages, cost of raw materials, number of people and their buying power and standard of living. By chance he came to the Geographic Section for a map on which to show railroads and roads. During our conference it developed that a population map of the countries thru which he planned to distribute his articles might be of value. "Yes," he said, "that would be of great help to me, but the information is not available." He was greatly surprised that a map such as he wanted could be made. Next was

discussed the advantage of a topographic map and detailed data on humidity, temperature, and other climatic conditions. His initial reaction to each of these suggestions, was that the data would be extremely valuable, but was not available. Climatic data were grafed on our familiar chart No. 80, and with the maps were used before the Board of Directors of this concern capitalized at many millions, in deciding for or against the contemplated foreign enterprise.

Another firm had had constant difficulty for more than a year with every sample sent out to a certain foreign country. None of their products would hold up in the foreign climate. The matter was brought to the attention of one of our District Offices, and this office referred it to Geographic Section, which in turn gave the concern, which happened to be one of the six leading organizations of its kind in the country, the specific information needed for laboratory experiment in their own plant. As a result they were able to ship a satisfactory product.

In short, as a result of the many problems which are presented constantly to the Geographic Section in such numbers that it is almost impossible to handle them, my conviction is that the business man of today can use, will use, and absolutely requires geographic information. He must be in a position, so to speak, to survey the world, to visualize his great field for trade in the United States or abroad, or to understand the regions from which he draws his raw materials. Only with such a broad, geographically intelligent point of view can he handle his business successfully.

The geographic background is just as necessary to him as the background of foreign financial conditions. Not long ago an important manufacturer in this country told me that for years they had overlooked what had since proved to be their most important foreign market in a given country, because they did not have the type of information which the geographer could give them. This same manufacturer has submitted to the Geographic Section, a real geographic problem for solution.

EQUAL AREA WORLD MAP NOW USED

In this connection there is another point of vital importance in the teaching of geography. It is one on which the Department of Commerce has taken a very definite stand in connection with its own work. You are all familiar with the world map of our grammar

school days, commonly known as the Mercator World Map. Thanks to Dr. Goode, who split the lobes of the old Mollweide projection, much as an orange peal is flattened, the world is mapped in its true proportions for the present school generation. When Albrecht Penck, the great German geographer, was in my office last year we discussed maps of all sorts. In the course of our conversation, Professor Penck said that he believed the Mercator World Map had had a pernicious influence on European politics, in that it overwhelmingly exaggerated the regions to the northward and eastward, creating an unbalanced consciousness regarding Slavic areas and the so-called Slavic peril. He also pointed out the lack of balance from North to South on the Mercator Map. Until the present, we have had little interest in the Antarctic region, consequently the Mercator World Map cuts off that entire area. This brings the center of the map thru the Caribbean region. The impression thus given is that the Caribbean region and Northern Africa are on the Equator, which of course is wrong.

The Department of Commerce believes that only an equal area world map will present regions correctly, market areas, and facts of distribution in true proportion, and that only an equal area world map should be used for these purposes.

When intelligent, more-than-average-educated men come into my office they look at the equal area map hanging on the wall and say that Europe is too small, or Africa is too large, or Alaska isn't all there. These reactions are given so instinctively that it only goes to prove the erroneous impressions unconsciously gained thru the use of the Mercator map. It is to be hoped that in the teaching of today the equal area world map may be used, and Mercator World Map left for use of the navigator for whom it was designed and for whose purposes it is preeminently suitable.

Geography Must be Taught as Geography Not as Something Else

These concrete illustrations of actual practical application of geographic science to vital problems of today cannot but reveal the absolute necessity of teaching geography as such. They also afford all geography teachers a consciousness of the value, significance, and necessity for the subject. With such a challenge no geography teacher can remain lukewarm or half-hearted or unconvinced of the value of geography. Geography is absolutely essential, on its own merits and for its own inherent value.

THE WESTWARD MOVEMENT OF COTTON GROWING IN THE UNITED STATES

CHARLES E. LANDON
Duke University

INTRODUCTION

One of the important changes in our cotton growing industry during the past decade has been the shifting westward of the center of production. This has resulted thru the increase of the acreage planted to cotton in the western end of the Cotton Belt and chiefly because of the increased acreage in Texas. The following tables summarize the extent of this movement since 1900.

Period	*Acreage*	*Production (bales)*
1900-04	27,632,657	10,708,835
1905-09	30,658,031	11,538,973
1910-14	35,330,400	14,259,231
1915-19	34,962,400	11,481,084
1920-24	35,449,200	10,890,962
1925-28	44,803,750	15,497,250

Average annual acreage and production of cotton by states in percentages of the total acreage and production for the United States.

State	*Acreage*						*Production*					
	1900-04	1905-09	1910-14	1915-19	1920-24	1925-28	1900-04	1905-09	1910-14	1915-19	1920-24	1925-28
Group I[1]												
Alabama	12.8	11.7	10.8	8.2	7.9	7.7	10.4	10.3	10.4	6.3	6.7	8.1
Florida	0.9	0.9	0.7	0.5	0.3	0.2	0.6	0.6	0.4	0.4	0.2	0.2
Georgia	14.4	14.9	14.6	15.2	10.8	8.3	13.8	15.7	15.8	16.6	8.3	7.8
Louisiana	5.8	4.8	3.1	4.7	3.8	4.1	8.0	4.1	2.6	4.0	3.4	4.6
Mississippi	11.9	10.5	8.9	8.6	8.4	8.0	12.9	11.8	8.6	8.3	8.0	10.7
South Carolina	6.1	7.8	7.7	8.2	6.3	5.8	8.3	9.6	9.6	11.2	8.1	5.7
Total	51.9	50.6	45.8	45.4	37.5	34.1	54.0	52.1	47.4	46.8	34.7	37.1

The accompanying table shows a gradual movement westward until 1920; then a more rapid one. It is this latter phase which is of interest here, and its influencing factors will be discussed briefly.

[1] Group I includes those states in which weevil damage has been greatest and in which there is no possibility of shifting the area of production out of weevil territory. Group II includes those states which have areas on their northern or western edge toward which the growing of cotton may be shifted.

State	Acreage						Production					
	1900 -04	1905 -09	1910 -14	1915 -19	1920 -24	1925 -29	1900 -04	1905 -09	1910 -14	1915 -19	1920 -24	1925 -28
Group II												
Arkansas	6.8	6.6	6.5	7.8	8.1	7.8	7.6	6.8	6.5	8.2	8.7	8.6
Missouri	0.2	0.3	0.3	0.4	0.7	0.9	0.4	0.4	0.5	0.5	1.0	1.3
North Carolina ..	4.1	4.3	4.4	4.3	4.6	4.3	5.3	5.6	6.1	6.9	7.9	6.7
Oklahoma	3.5	6.3	7.8	7.5	8.4	10.1	4.6	6.3	7.1	6.9	8.3	9.3
Tennesse	2.8	2.5	2.4	2.4	2.6	2.4	2.4	2.4	2.5	2.7	2.9	2.8
Texas	28.3	28.8	32.3	32.2	33.9	39.1	25.5	25.5	29.0	26.7	34.7	31.9
Virginia	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3
Total[2]	45.8	48.9	53.7	54.7	58.5	64.8	45.5	46.7	51.9	52.1	63.8	60.9

[2] A few states which produce small amounts have been omitted.

Reasons for the Westward Movement

It is unnecessary to say that cotton production has shifted westward because lower costs of production prevailed there than farther east. This does not mean that all of the cotton grown in the West has a lower cost of production than the eastern cotton. Costs of production vary from one district to another and from one farm to another. But when conditions, which will be discussed shortly, arose in the eastern sections, which had the effect of increasing unit cost of production, it was natural that the industry should move toward a region where these conditions were not encountered on a large scale. In the east the marginal farmers, those with the higher costs of production, were driven from the industry, leaving only those with the lower costs which could compete with the costs of the West. Thus, there was a decrease in production in the eastern part of the Cotton Belt and an increase in the Western part.

The Boll Weevil. The most important reason for the change, and the one upon which the other reasons hinge more or less, is the invasion of the Cotton Belt by the boll weevil. This pest entered the United States from Mexico in 1892, near Brownsville, Texas. From there it was gradually carried eastward by the westerly winds. In these more eastern sections it also found more favorable climatic conditions. The boll weevil does not thrive in hot, dry weather or in cold weather. In the older cotton areas it found the warm, humid conditions necessary to its existence; while in the western end of the Cotton Belt, dry, hot conditions prevail. This region is also subject to frosts and cold weather in winter, and not as many of the weevil live thru the winter as in the more eastern cotton districts.

The boll weevil did not cause widespread destruction for many years after its invasion. It gradually spread, however, until by 1913 it was causing serious trouble in many places. By 1922 it had infested all of the Cotton Belt but the western and northern fringes. In 1921, about one-third of the entire cotton crop was destroyed by the weevil; and it is since that date that expansion of the cotton area in the West has been most rapid.

The effect of the boll weevil was to reduce the yield and thus increase the unit cost of production. This forced the marginal cotton lands out of production. Those farms which had lower costs because of more favorable conditions could still be kept in cotton because the damage done by the weevil was not sufficient, on the average, to cause an actual loss. If the damage increased, however, more lands would be forced from the industry. Good prices and less damage by the weevil for a few years would attract some of these lands back into the industry. So long as the weevil was not present, the more dependable climate of the eastern section, with the resulting higher yield per acre, kept the unit cost down and gave that section an advantage over the western area.

Negro Migration. Another influence is the migration of the Negroes toward the manufacturing centers of both the northern and the southern states. The World War and restrictive immigration legislation since then, left a gap in the labor supply of the northeastern industrial districts and the Negro moved in to fill it. The expansion of manufacturing in the southern states had also drawn many from the country districts into the larger southern cities.[3]

The boll weevil is at least partially responsible for the migration of the Negroes. The destruction of the cotton crop by the weevil left but little work, at times, to be done in many sections. The farm workers were never certain that work could be obtained from one year to the next; so they went where employment was more certain and stable. At the same time, the movement for a greater diversity and a rotation of crops has been making headway in the Cotton Belt, especially in the older sections. This again would make less demands upon labor since the other crops that are grown do not require as much as cotton does.

In the western end of the Cotton Belt a smaller proportion of

[3] Information regarding this migration between 1910 and 1920 can be found in a census monograph by W. S. Rossiter, entitled, Increase In Population In The United States, 1910-1920, P. 127. Since 1920 no accurate statistics are available.

the population is Negro than in the older cotton states. That region, then, is not as dependent upon Negro labor to grow its cotton as are the older cotton states. In addition, the farmers of the western region employ larger scale methods of farming than do those farther east. They use more horse power and machinery and have larger farms. They are thus not so dependent on human labor. When labor became scarcer, and thus more expensive, in the eastern states, it was only natural that the industry should move to a place where labor was a less important item, relatively, in the cost of production.

Figures of the United States Department of Agriculture show the different labor requirements of cotton in different sections. "In the eastern cotton states on farms where the yield of lint is 150 to 200 pounds per acre, 100 to 125 hours of labor are usually necessary to prepare, cultivate, harvest, and market an acre of cotton."[4] In the black belt of Texas, 50 to 60 hours of labor per acre are required on land yielding 140 to 160 pounds per acre. With a similar yield in West Texas, 35 to 40 hours of labor per acre are required.

Coincident with the greater destruction done by the boll weevil, has been the migration of the Negroes from the cotton districts, which has made labor there scarcer and higher and increased still more the unit cost.

The Soil. The above are not the only factors causing a lower cost of production in the West. That section has advantages which might have caused an expansion of the cotton area under any circumstances. This would certainly be the case with an increasing demand for cotton. The soil is one of these factors. This region has a new and fertile soil over large areas. East of the Mississippi, the soil has been worn out and fertilizer is used on a large percentage of the land. The cost of fertilizer, then, does not have to be incurred in the West. On the other hand, it could not be applied as successfully in a hot, dry region as it can where there is abundant rainfall. Unless the lands of the West are preserved by good methods of farming, the depletion of soil fertility may offer a serious problem in the future. The region is also level, which permits the use of heavy machinery.

Climate. The climate of this Western region has other advantages in addition to its being unfavorable to the spread of the boll weevil. Its dryness is an aid in cultivating the soil and in keeping

[4] Yearbook of the U. S. Dept. of Agriculture, 1926, p. 466.

the crop free of weeds. Not as much cultivation will have to be given as in regions with greater rainfall because the weeds do not grow as rapidly nor as thick on the ground. The region is also subject to early frosts. This, in conjunction with its dry nature, kills the leaves on the plants and makes harvesting easier. All of the bolls can be harvested at one time and machines have been devised to do this work.

Methods of Farming. All of the conditions in this region, then, combine to make large-scale farming operations possible. Farms with as much as 100 acres of cotton are common. Farther east the average size is from 10 to 20 acres. These latter farms are so small that good machinery and equipment will not pay for itself. This is one reason for the poor methods of production in general use in these sections.

In this connection something should possibly be said about a mechanical cotton picker. If a successful machine of this nature is developed the case for the larger farms of the West would be still stronger. Such an implement would certainly be too costly to be used on a small cotton farm.

EDITORIAL NOTES AND NEWS

We are all aware of the great progress that has been made in Canada in recent decades. However, Canada has lacked an important institution. It has been far too long without an active geographical society. This defect has now been remedied and we welcome to the fold of geographical organizations the new CANADIAN GEOGRAPHICAL SOCIETY. The Society is to be Dominion-wide in scope as provision is made for representation of each Province on its Board of Directors. It is the Society's ambition to make itself a real force in advancing geographic knowledge, and in disseminating information on the geography, resources, and peoples of Canada. It will publish a monthly magazine—*The Canadian Geographical Journal*—which will be devoted to every phase of geography, first of Canada, then of the British Empire and of the other parts of the world in which Canada has special interest. It is the intention to publish articles in this magazine that will be popular in character, easily read, well illustrated, and educational to the young as well as informative to the adult. The new *Journal* will be sent to each member of the Society and membership is open to all. The annual fee is $3.00. We hope that many geographers on this side of the line will be interested in the Canadian Geographical Society. Those interested should address the Honorary Secretary, E. S. Martindale, 238 Sparks Street, Ottawa, Canada.

Manchester has become the second port for the importation of petroleum products into the United Kingdom. These imports show an increase of 149 per cent from 1924 to 1928. It is estimated that approximately 10,000,000 people can be most economically served from this port. This represents nearly a fourth of the total population of the United Kingdom. The Manchester area also includes a very large proportion of several important British industries including textiles, iron and steel manufacturers, machinery, rubber products, and paper. London ranks first in quantity of petroleum products imported exceeding Manchester about two and one-half times.

In January we called attention to the movement of 3,000 head of reindeer from Alaska to Arctic Canada. The reindeer are now in the Colville Basin, and the drive will be resumed next fall. This drive of reindeer directs attention to the potential resources of Arctic lands. The Department of Interior, Ottawa, Canada, has issued recently four publications dealing with this part of Canada. These are entitled, The Northwest Territories; Aerial Mineral Explorations of Northern Canada; Coronation Gulf Copper Deposits; and Reindeer Grazing in Northwest Canada. All these publications will be of great value to teachers of the geography of Canada.

We are often inclined to think that modern highways are rare in far distant lands, especially those classed as "backward" countries. It is therefore encouraging to note the great progress made during the past 10 years in the Philippine Islands. In 1910 there were 3,480 miles of highway. This had increased to 7,850 miles at the end of 1929, and more than $7,800,000 were expended on highways during the last named year. More than 4,200 miles are first-class highways.

Regular train service over the new Hudson Bay Railway to Churchill, Manitoba, opened during the fore part of April. The first schedule will be operated by "mixed trains" making the run between Churchill and the Pas in about three days, stopping overnight at mile 137 and mile 327. It is planned to place the first sleeping car trains in operation during the first part of June. These schedules will officially open a new outlet from the interior of Canada by way of Hudson Bay. The value of this railway has long been a subject of debate in Canada. It is now in operation. What will its future be?

GEOGRAPHICAL PUBLICATIONS

Chas. L. Pack and Tom Gill. **Forests and Mankind.** 250 pp. 24 photos, numerous sketches. Macmillan, N.Y. 1929. $3.00

This is an excellent book for it presents in a readable form the story of the life of trees and forests, their service to human welfare and progress, the problems of practical forestry and the advance of the forestry movement in this country. It will appeal to everyone interested in the forest. The authors have exceptional qualifications for presenting an authoritative popular book on this important subject. Dr. Pack is past president of the American Forestry Association, and an honorary member of the Society of American Foresters. Mr. Gill is a trained forester, formerly in charge of the educational activities of the U. S. Forest Service.

The comprehensive scope of the book is suggested by the titles of the chapters. The Tree; How Trees Grow; The Forest; Forests of Long Ago; Forests of the World; Forests of the United States; What Forestry Is; How the Forester Works; Forestry in the United States; Our National Forests; How the Forests Help Mankind; Wood, Paper, Other Gifts of the Forest; Forests and Wild Life; Forest Enemies; Fire—the Great Destroyer; The War Against Waste; Forestry and the Farmer; Industrial Forestry; The Task Ahead.

The photographs are exceptionally fine, and the numerous sketches are not only decidedly educational but many are so clever as to be entertaining. Forests and mankind is strongly recommended for school libraries.

Indiana University

S. S. VISHER

Henry W. Clark. **History of Alaska.** 200 pp. 7 maps, 18 photos. The Macmillan Co., N.Y. 1930. $2.50

The author was born in Alaska, and has lived there for some years. The book was written at Harvard University under the supervision of Professor Edward Channing, the eminent historian. These facts lead the reader to expect a worth while book, which expectation is not disappointed. Although the emphasis is on the history of Alaska, as the title implies, this book will contribute notably to an understanding of Alaskan conditions, including the geographic conditions. The author effectively portrays the need of fuller geographic knowledge on the part of our Congressmen and other citizens. The bungling in the management of Alaska is not creditable to America. It appears that for a long time after the purchase from Russia, Alaska was much more poorly handled than by the Russians. Since the Gold Rush of 1898 aroused widespread interest in Alaska, it has not been so sadly neglected, but our success has not been conspicuous. Indeed Herbert Hoover said, a few years ago, that "Americans made about as bad a job of governing Alaska as they could if they had set out to do their worst." In order to overcome this unfortunate condition, a much fuller understanding of Alaskan conditions is needed. Clark's History of Alaska certainly will contribute to this desired end. It presents in readable form brief chapters (10 to 20 pages each) on the following topics: Ethnology, Discovery and Exploration, Russian Occupation, Purchase, Period of Neglect, The "Rush" Era, International Complications, Territorial Government, Social and Economic Growth, Economic Development, Post War or Modern Alaska. The chapter on Geography and Climate (21 pp.) reveals the fact that Dr. Clark is not a trained geographer, but the merits of the other chapters make this book a desirable addition to a geographic library.

Indiana University

S. S. VISHER

R. E. Dodge and E. E. Lackey. **Advanced Geography.** 452 pp., 512 maps, diagrams, and photos. Rand McNally & Co., Chicago. 1929. $1.65

In this book the writers aim at two things: (1) To provide the pupil of the upper grades with organized, geographical subject matter, and (2) to provide him with instructional aid toward his mastering of the subject matter, which mastery will help him to find in current geography an "everyday source of usefulness" and help him to understand "new geography as it unfolds from day to day and from year to year." Thus they assume the rôles of author and, to a limited extent, teacher. It is an excellent book.

Part I (64 pages) deals with "Elements of Human Geography." Part II (356 pages) is devoted to "Regional Geography of the Continents." Therein the foreign countries are treated mainly in groups, the basis of grouping being physical, whereas the treatment of the United States conforms largely to the arrangement of the United States Census. Eight pages of an appendix are mainly devoted to maps and diagrams, and six pages to statistical reference tables. For each major division of the text, page references are given for collateral reading; they are selected from thirty-five books, half of which are texts, some of which are on the college level.

The author and the teacher rôles are interwoven in this book, but they are fused very little; thus the continuity of the subject matter is preserved better than in most "instructionalized" texts in the following way: (1) Most major divisions are introduced by map studies, and there are lists of minimum essentials in location for United States divisions. (2) Each section is preceded by a lesson forecast outline, and (3) followed by a list of related problems and suggestions, but internally the section is free from instructional aid. (4) The figures are accompanied by description and by instructional questions and directions. It is not wholly agreed that a text is improved by the current style of associating author and teacher within the covers of one book.

Each lesson forecast is largely a statement of a number of problems which are to be solved by the pupil in connection with his studies of the section and which presumably are to constitute the basis of the class discussion. Thus, fortunately, the classroom teacher is by no means limited to the rôle of a clerk by the author-teacher. Usage alone will determine the value of such instructionalization-largely-thru-problems. Certainly they and the textual materials are not too "easy" for upper grade children.

Many sections of the textual matter are introduced by historical material or by characterization, both of which lead the pupil to the main economic activities of the country or region; these in turn focus attention upon the related natural environment, which also in turn sheds insight into the description of cultural aspects which follow, and aids in the concluding statement of problems. The book could be improved by more full statements of the nature of the numerous geographic relationships which are noted and implied.

Among the few errors noted is a statement that Great Britain and Ireland form the United Kingdom. England now surpasses Belgium in density of population. The maps and illustrations are excellent and the print is clear.

Indiana State Teachers College

B. H. SCHOCKEL